

# Notice of Allowability

Application No.

09/941,827

Examiner

Thanhha Pham

Applicant(s)

WEIMER, RONALD A.

Art Unit

2813

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 7/19/2006 and interview dated 7/20/2006.
2. ☒ The allowed claim(s) is/are 1-7,11-27,30-62,78-87,89-110,114-122, 124,126-140 and 145-157.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some\* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

## Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date \_\_\_\_\_
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

THANHHA S. PHAM  
PRIMARY EXAMINER

## **DETAILED ACTION**

This Office Action is in response to Applicant's Amendment dated 7/19/2006

### **EXAMINER'S AMENDMENT**

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Alan Wagner on 7/20/2006.

The application has been amended as follows:

- In claim 2,  
line 4, change "oxide" to – oxynitride –
- In claim 12,  
line 1, before "nitride" insert – the –
- In claim 25,  
line 5, after "a nitride layer" insert – on the thin oxide layer –
- In claim 34,  
line 8, before "plasma" insert – activated –
- In claim 41,  
line 6, before "plasma" insert – activated –

- In claim 81,  
line 4, delete "to form"
- In claim 85,  
line 6, after "layer" delete -- , --  
line 6, change "the plasma" to -- in a plasma --  
lines 7-8, after "nitrogen and argon", delete "in a plasma generated  
nitrogen gas to nitridize the oxynitride layer"
- In claim 86,  
line 6, after "layer" delete -- ; --  
line 6, before "the plasma" insert -- to form a nitridized oxynitride layer on  
the oxynitride layer, --
- In claim 94,  
lines 7-8, after "generated nitrogen gas selected from the group consisting  
of", delete "a plasma mixture of nitrogen gas selected from the group consisting  
of"
- In claim 149,  
line 5, change "annealed polysilicon" to -- oxide --
- In claim 154,  
line 2, before "anneal" insert -- oxygen --  
line 2, change "the presence" to -- a presence --

***Allowable Subject Matter***

1. Claims 1-7, 11-27, 30-62, 78-87, 89-110, 114-122, 124, 126-140, 145-157 are allowed.
2. The following is an examiner's statement of reasons for allowance: Recorded Prior Art fails to disclose or suggest the combination of the process steps of forming a dielectric layer comprising: annealing polysilicon in nitric oxide to form an oxide layer or an oxynitride layer on the polysilicon; and nitridizing the oxide layer or the oxynitride layer to form a nitride layer, a silicon nitride layer, a nitridized oxide layer or a nitridized oxynitride layer on the oxide layer or the oxynitride layer by a plasma mixture of nitrogen and helium or nitrogen and argon.
3. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."
4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thanhha Pham whose telephone number is (571) 272-1696. The examiner can normally be reached on Monday and Thursday 9:00AM - 9:30PM.
5. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl Whitehead can be reached on (571) 272-1702. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TSP

A handwritten signature in black ink, consisting of several loops and a long horizontal stroke at the end.

**THANHHA S. PHAM  
PRIMARY EXAMINER**